Report No. 8

PLANT REMAINS FROM THE RICHARDS AND PHILO II SITES, MUSKINGUM COUNTY, OHIO

by

James L. Murphy

Cultigens

Maize--Although the remains of maize do not appear to have been abundant at either Richards or Philo II, being available from about twenty refuse pit samples from the latter site and from a half dozen at Richards, enough has been recovered to indicate that maize was an important staple at both sites. The difference in amounts recovered from either site is undoubtedly fortuitous and cannot be used to infer that maize was less important at one site than the other. Maize from both sites is excellently preserved and clearly represents for the most part 8-rowed Maiz de Ocho, identical in every respect with that described by Galinat (1970) from the Blain site.

Length and depth measurements of 200 kernels from Feature 306 at the Philo II site were made and are presented in Table I. These compare well with the data given by Galinat. Mean cupule width of the 8-rowed maize is 9.7 mm. Three cob fragments representing 6-rowed maize occurred at Richards, but these appear to represent small deformed "nubbin" ends of 8-rowed maize. Two other small, deformed ears from the same feature have only 4 rows of kernels developed. A single feature at the Richards site contained two cob fragments of 10-rowed maize, 12 % of the total number of cob fragments in the feature.

Beans--The common bean (Phaseolus vulgaris) is represented in both collections, albeit sparingly. Six beans occurred in two features at Philo II. Measurements of length range from 8.2 mm to 12.1 mm, with a mean of 10.2 mm. A single specimen from Feature 75 at the Richards site has a length of 11.1 mm.

Gourd--Two small fragments of gourd (Lagenaria) were found in Feature 103 at the Richards site. No remains were found at the Philo II site, nor were traces of squash found at either site. In all probability, both squash and gourd were utilized at both sites and their absence from the collections is due to vagaries of preservation.

Wild Plant Remains

Soil samples containing abundant traces of charcoal, or amounts of carbonized nutshell or corn, were flotated in the laboratory. Nearly every sample thus studied provided abundant small seeds of various "weed" species, including chickweed (Stellaria media), carpetweed (Molluga verticillata), pigweed (Amaranthus sp.), knotweed (Polygonum sp.), dock (Rumex crispus), three-seeded mercury (Acalypha virginica), and lambs quarters (Chenopodium album). All of these, including the Chenopodium, appear to be recent

intrusions and were not utilized by the aboriginal inhabitants of the two sites.

Carbonized seeds representing species that were undoubtedly gathered by the inhabitants of Richards and Philo II include blackberry (Rubus sp.) very common at both sites, although some of the seeds may be recent intrusions; smooth sumac (Rhus glabra), represented by 12 seeds from two features at the Richards site and 15 seeds from three features at Philo II; fox grape (Vitis riparia), 6 seeds from Philo II and 1 from Richards; hawthorn (Crataegus sp.) and spicebush (Lindera benzoin) represented by one and two seeds, respectively from the same feature (155) at Philo II; a single wild plum (Prunus sp.) seed from Feature 109 at Philo II.

Also recovered was a single carbonized acorn (Quercus sp.) at the Richards site, along with a few fragments of black walnut shell (Juglans nigra). Hickory nut (Carya sp.) was very common at both sites, the most abundant wild plant material recovered, representing mostly C. laciniosa. C. ovata was identified in one feature (23) at the Philo II site, however, and C. glabra (pignut) is represented by two specimens from features 53 and 55 at the Richards site.

Fragments of grasses and twigs were common at both sites, and one mass of coarse grass appeared to have been originally woven into a loose fabric. The material was too incomplete and fragmentary to allow generic identification, however. The only grass seed noted in the collections was a specimen of Digitaria, undoubtedly a recent intrusion.

Discussion

Plant remains were common and well preserved at both the Richards and Philo II sites. Maize and beans were probably the most important plant food source, supplemented by the gathering of hickory nuts and blackberries. In general, the plant remains indicate summer and fall activity.

Although only a comparatively small amount of soil was flotated from the two sites, it is believed that a representative sample has been obtained. Several species are surprisingly rare or absent at both sites, however. Notably rare is black walnut, particularly surprising since it should have been a conspicuous element in the rich bottomland forest. The same is true of the pawpaw (Asimina triloba), absent from both collections. The presence of spicebush is noteworthy, since it has not previously been reported from Ohio Fort Ancient sites.

Associated with the plant remains and recovered during flotation were the remains of several small insects and terrestrial gastropods. Typhaea fumata Linn., the hairy fungus beetle, was readily identified, but the other remains (from Philo II) consist only of a few fragmentary, unidentifiable beetle elytra. The gastropods include Helicodiscus parallelus from Philo II and Zonitoides arboreus, both common species in the area today.

References

Galinat, Walton C.
1970 Maize from the Blain Site. In Blain Village and the Fort Ancient Tradition in Ohio, edited by Olaf H. Prufer and Orrin C. Shane III. Kent State University Press.

TABLE I

Percentage of corn kernels of various widths and depths, based on a sample of 200 kernels from the Philo II site, Muskingum County, Ohio.

Kernel width in mm	Kernel depth in mm: 5	6	7	8
6	1.5			
7	3.5			
8	11.0	23.5	4.5	2.0
9		19.0	8.5	1.0
10		9.0	9.0	4.0
11			2.0	1.0
12				0.5

(Fig. 8-1) Examples of 8-rowed Maiz de Ocho from the Richards site.

(Fig. 8-2) Cross section of an 8-rowed ear.